

AMENDMENTS TO THE SPECIFICATION

Please amend the paragraph beginning on page 8, line 12, as follows:

As shown in Figs. 2 and 3, the abrasive grains 12 are aligned and firmly fixed to an end face 11b of the core 11, and a circumferentially continuous V-sectioned groove 13 is formed in a substantially central portion of the end face 11b. The abrasive grains 12 are firmly fixed to the end face 11b excluding the groove 13, over an end face portion excluding regions near ~~an outer rim 14, near an inner rim 15, an outer rim 15, near an inner rim 14,~~ and near the boundaries with the groove 13 under the condition that, with respect to all the abrasive grains 12, skirts of the brazing material layer for holding the abrasive grains 12 have a length L one or more times an average grain size of the abrasive grains. In this grinding wheel 10, it is of particular importance in view of avoiding grain fall-out that the region near the inner rim 14 and the region near the outer rim 15 of the end face 11b are regions 16 where the brazing material layer alone is formed with no abrasive grains 12 arranged. In conventional grinding wheels, abrasive grains have been arranged even in the vicinity of the outer rim and in the vicinity of the inner rim of the end face, and the grain holding forces on these abrasive grains from the brazing material layer have thus been insufficient, which has facilitated grain fall-out during machining. On the other hand, in the grinding wheel 10 of the present embodiment, the abrasive grains 12 are excluded not only from the vicinities of the boundaries with the groove 13 but also from the region near the inner rim 14 and the region near the outer rim 15 of the end face 11b to secure sufficient grain holding forces of the brazing material layer for all the abrasive grains arranged, so that grain fall-out is avoided during machining.

Please amend the paragraph beginning on page 10, line 3, as follows:

The invention 1 and the comparative article 1 were investigated for the areas machined by the foregoing grinding before the surface roughness of the substance to be ground deteriorated. Table 1 shows the results.

Table 1

	Power consumption	Life (machined area)	Surface roughness Rz <u>Surface roughness</u> (Maximum height of profile Rz)
Invention 1	100	300	3.5 μm
Comparative article 1	100	100	10 μm

Please amend the paragraph beginning on page 10, line 9, as follows:

~~In Table 1, the power~~ Notes: • The power consumption and the life are shown as indices with those of the comparative article 1 as 100.

• Rz is by definition of JIS (Japanese Industrial Standards) B0601-2001.

Please amend the paragraph beginning on page 10, line 11, as follows:

In the comparative article 1, grain fall-out occurred at the corners of the core end face and ~~the surface roughness Rz~~ the maximum height of profile Rz exceeded 10 μm , at which time it was called life. In contrast, the invention 1 maintained ~~the surface roughness R to or below 3.5 μm~~ the maximum height of profile Rz to or below 3.5 mm even when the machined area reached or exceeded three times that of the comparative article 1.

Please amend the paragraph beginning on page 10, line 18, as follows:

Fig. 4 shows grain fall-out ratio and ~~surface roughness~~ maximum height of profile Rz when the width of the region provided with no abrasive grains (for convenience, hereinafter referred to as a buffer layer) in each of the regions near the outer rim and near the inner rim of the core end face and near the boundaries with the groove is changed within the range from zero to three times the average grain size of the abrasive grains. The abscissa of Fig. 4 shows how many times the width of the buffer layer is with respect to the average grain size of the abrasive grains. As can be seen from the chart, grain fall-out significantly decreases and favorable work surface roughness is maintained when the width of the buffer layer, which is provided with no abrasive grain, is in the range from one to three times the average grain size of the abrasive grains.

Please amend the paragraph beginning on page 11, line 6, as follows:

Fig. 5 shows ~~work surface roughness~~ maximum height of profile Rz and the spindle load factor of the grinding machine when the amount of truing (the amount of cut-off) is changed in forming flat portions on the extremities of the abrasive grains on the inside region. The abscissa of Fig. 5 shows the ratio of the amount of truing to the average grain size of the abrasive grains.

Please amend the paragraph beginning on page 12, line 8, as follows:

As a result of the grinding, the comparative article 2 showed the same result as that of the comparative article 1 in the embodiment 1, while the invention 2 showed no grain fall-out nor occurrence of scratches. Besides, chips produced during machining were

captured into the center groove to preclude chip bites, achieving ~~a work surface roughness~~
a maximum height of profile Rz of 3 μm or less.